Castilleja linariifolia

Castilleja

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Common names for uncommon plants

Bonnie Heidel, Wyoming Natural Diversity Database

"*…A rose by any other name would smell as sweet.*"
W. Shakespeare

The use of common names for vascular plants in Wyoming, and for the Wyoming plant species of concern (SOC) in particular, is source of smiles and teeth-gnashing. Maybe we shouldn't fret common names for the rarest of plants, and just take our cues from Shakespeare. However, names anchor identity, common names in particular make plant taxonomy far more accessible to the general public and land managers, and they provide identification clues and underscore uniqueness.

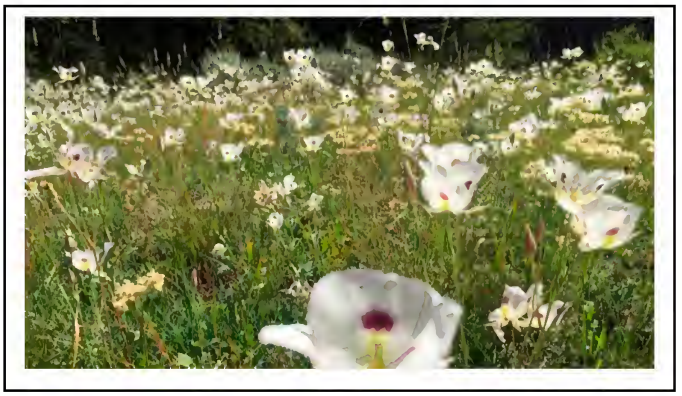
Common names for each species are usually composed of two parts, a group name (for the genus or some recognizable subset of species in the genus) and a modifier for the species (Kartesz and Thieret 1991). The best and most complete source of common names for Wyoming plants – at the genus level – is Dorn (2001). National sources for common names have come on-line with Biota of North America (BONAP; http://www.bonap.org/), basis for the Natl. Wetlands Plant List; also incorporated in part into the PLANTS database (https://plants.usda.gov/).

Most people know plant common names from guide books and as represented in some floras, but there may be many different published common names for genera, species, and their combinations. Unlike scientific names, common names do not follow uniform standards or processes for selection and revision, lending color and confusion, and variously drawing from lore, tradition, whimsy, or terse transliteration of scientific names. Moreover, the challenges are different in applying common names for widespread species at one end of the spectrum and rare ones at the other. (*Continued, p. 4*)

In this Issue:
Common Names for Uncommon Plants 1,4,5
A Great Resource Gets Greater 3
Growing Native Plants: Short Flowering Shrubs .. 6,7

Above: -Mutiny of the monocots! A four-petal flower of *Calochortus gunnisonii* (Gunnison's mariposa-lily) on Medicine Bow National Forest, by Wendy Haas, 2017.

Below: -More mariposa magic! *Calochortus eurycarpus* (white mariposa lily) flowering profusely in the Green River Basin, by Julie Kraft, 2017.



…What's in a common name? Consider the *Calochortus* genus – is it Mariposa lily? Sego lily? Star tulip?

WYNPS News

Renew and VOTE: The calendar year is the time for annual membership renewal and voting. Enclosed in this issue is your renewal form and 2018 ballot. Renewals can also be done on-line through PayPal, and voting through the Society homepage: www.wynps.org . Votes need to be received by 31 January – *thank you*!

Call for scholarship and grant applications: Student scholarship and small grant applications are being accepted now through 15 February, by mail or the WYNPS email address. Please feel free to post or distribute the 2018 announcement.

WYNPS Board – 2017
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Teton Plants: Amy Taylor, Treasurer; (tetonplants@gmail.com). *Check the chapter homepage above for an exciting slate of winter talks!*

Also: Bighorn Native Plant Society: Jean Daly, Treasurer (P.O. Box 21, Big Horn, WY 82833)

New Members: Please welcome the following new members to WYNPS: Al Schneider, Lewis, CO; and Karen Fettig, Manderson.

Treasurer's Report: Balance as of 1 Dec 2017: Scholarship = $1,300; General = $6,931; Total = $8,241

Wyoming Native Plant Society
P.O. Box 2449
Laramie, WY 82073

Message from the President:

Hello and hope warm fires and good company surrounded you at Thanksgiving. We have much to be thankful for, and the weather has been unusually warm to accommodate our travels.

Please mark your calendars for the weekend of **July 20-22, 2018**, for our upcoming annual field meeting. We are heading to the Wyoming Range, north of Kemmerer and northeast of Cokeville. We are fortunate that Oval Harrison, author of *Wildflowers of Star Valley and the Tri-basin Country*, is going to share his knowledge of the greater area, and Sherel Goodrich, retired botanist with the US Forest Service, will be leading a hike to one of his favorite destinations, the tall-forb community. We are pleased to be hosting these two and are in the midst of organizing more interesting hikes and functions. We will announce those soon! Safe travels to all during this holiday season!

~Charmaine Delmatier, President

Contributors to this Issue: Charmaine Delmatier, Robert Dorn, Wendy Haas, Bonnie Heidel, Julie Kraft, Dorothy Tuthill.

Next Deadline: Please send articles, any ideas and announcements for the next issue by 15 Feb 2018.

A Great Resource Gets Greater

The University of Wyoming Rocky Mountain Herbarium (RM) is already a leader in the region and nation in its online database of digitized specimens, also notable in collection size and activity. New NSF support will make it possible to increase the rate of specimen digitization and imaging at RM, and integrate an estimated 670,000 Southern Rocky Mountain specimens into the new Southern Rockies portal. A new award from the National Science Foundation will create a comprehensive digital archive of more than 1.7 million plant specimens native to the Southern Rocky Mountain region. The University of Colorado, Boulder, is the principal lead for the award, which includes 38 universities, botanical gardens, national parks and Native American Nations. The Rocky Mountain Herbarium, as the largest herbarium in the region, will contribute a significant number of specimens, and will assist smaller institutions in their digitizing and imaging efforts.

Once completed, researchers and the public will be able to access the database for information about the region's more than 4000 plant species, from specimens collected in the 1800's to the present. The map-based application will allow visualization of species' distributions, and make available high-resolution images of plant specimens. "Herbarium specimens are used more and more to document natural resources, elucidate evolutionary relationships and processes, describe the effects of climate change, and to identify organisms and landscapes of conservation concern. Consolidating specimen data from these institutions will lead to more and better understanding of these topics in the Southern Rocky Mountains, and may bring to light patterns that have been previously invisible" stated Rocky Mountain Herbarium curator Burrell "Ernie" Nelson.

Curator Nelson will oversee specimen selection and imaging at RM. Larry Schmidt, of the UW Libraries, is project manager for the digital processing and work flow. UW Libraries are also involved in the data management, file processing and preservation aspects of the project. The Southern Rocky Mountain project area includes major portions of southeastern and northeastern Wyoming (Figure 1).

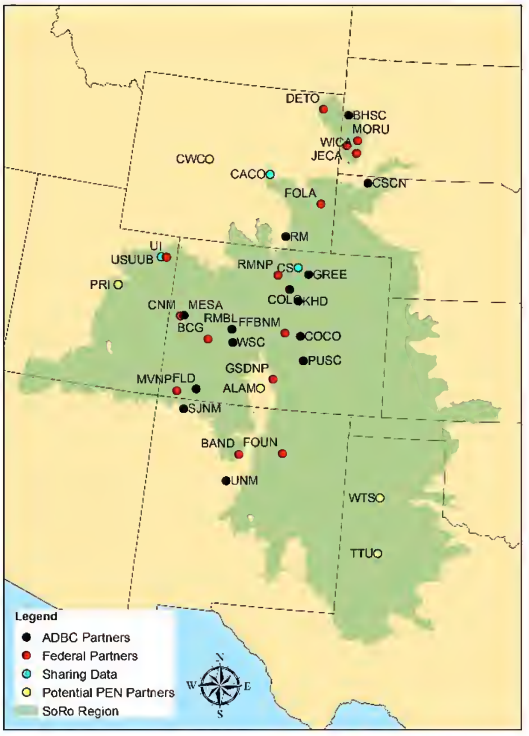


Figure 1. The project boundary as drawn for the Southern Rocky Mountains (shaded), and related institutions/partners of the region (dots).

Happy Anniversary!!

CONGRATULATIONS to states and their respective native plant societies marking 2018 anniversaries, including the Botanical Club of Wisconsin on their 50th Anniversary, and the Kansas, Tennesee and Utah Native Plant Societies on 40th Anniversaries! The Delaware Native Plant Society also marks its 20th Anniversary in 2018. For the records, the New England Wildflower Society, founded in 1900, is the oldest among U.S. native plant societies, and Wyoming Native Plant Society marks its 37th year in 2018. A chronicle of founding dates among native plant societies of the United States was prepared by Jan Loechell Turner as printed in *Aquilegia,* Newsletter of Colorado Native Plant Society 41(4) in summer 2017 (posted at: https://conps.org/wp-content/uploads/2017/10/Aquiilegia-41-4-Summer-2017.-5-1.pdf).

Common names for uncommon plants, cont. from p. 1

Take the case of the *Amelanchier* genus. Different parts of the country have long-standing common name conventions that may or may not make sense across species' distribution. Pastor (2017) noted:

> In the North Woods of Minnesota, we begin picking juneberries in the middle of July. In slightly warming climates the berries ripen in June, hence the name. …Along the Atlantic Seaboard this beautiful small tree is called shadbush because there the trees bloom when the shad make their mating runs from the ocean up into the rivers. In the Great Plains, they are called by their Indian name Saskatoon (from which the town in Saskatchewan gets its name). Serviceberry is also a common name for juneberries… [including Wyoming]. This name appears to be an Anglo-Saxon corruption of the Latin *Sorbus*, which is a genus of an entirely different tree, the mountain ash, which looks nothing like the juneberry except for also producing reddish berries."

Other authors refer to it as "alder-leaf serviceberry", a transliteral rendering of the scientific name. Any one of these common names is "right." Dorn (2001), too, refers to the *Amelanchier* genus as "serviceberry." Wyoming's most common species in the genus, *Amelanchier alnifolia,* is called Saskatoon service berry, with or without the hyphen by BONAP and by the PLANTS database – one hyphen away from concensus!!

Common names in the PLANTS database were assigned species-by-species in the Biota of North America (http://www.bonap.org/). At the onset, an upfront set of rules (Kartesz and Thieret 1991) were published; and are now posted: http://www.bonap.org/Help/Common%20Names.htm . The published rules are long on details of structure and punctuation and lend considerable consistency. They do not address basic questions of making choices among alternative common names. Ideally, common names come from the core of species' distributions, though any set of common names assigned under the constraints of such an endeavor is prone to favoring one set of conventions over another.

Before BONAP posting and the later PLANTS database posting, WYNDD tapped Dorn (2001) and earlier editions, regional floras, and other published precedents. The fact of the matter is that many of Wyoming's rarest plant species have never had wide use of common names in the state. To the extent that they do, the majority of common names for rare plants are the same as those in BONAP and the PLANTS database. The question is what to do about the exceptions.

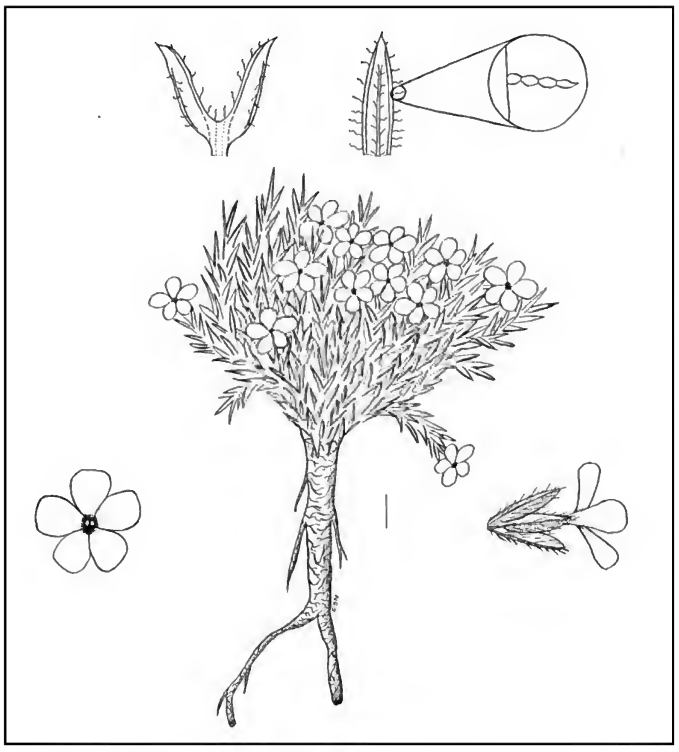
Listed below are some of the foibles encountered, and their proposed resolution:

Some common names in BONAP and in the PLANTS database have never been used in Wyoming, e.g., they refer to *Cryptantha subcapitata*, a Wyoming endemic, as "Wallowa cryptantha". This Oregon geographic place name is inappropriate for a Wyoming endemic and we will continue to refer to it by the "Owl Creek" moniker. Both sources refer to *Aletes humilis* as "Colorado aletes." It is a narrow endemic of Colorado that may have historically been collected just north of the border in Wyoming over a century ago. So in theory, it makes sense to call it "Colorado aletes." But botanists in both Colorado and Wyoming have usually used the common name "Larimer aletes"…except for Jennifer Ackerfield (2015) who took the initiative to use PLANTS database for common names in the Colorado flora. So…it's up to Colorado botanists.

Common names invariably create false impressions. The native status and values of all too many native plant families, genera and species are discredited by group names that include "-weed" (e.g., goldenweed, milkweed, snakeweed). But, …if there is only one widely-used group name, we're stuck with it, even for rare species.

The same common name may be assigned for different species, and for different taxonomic levels. For example, the name "prickly phlox" is applied to some species in the *Linanthus* genus, and to the Wyoming endemic species, *Phlox pungens*. The challenge is that both *L. watsonii* (Watson's prickly phlox) and *P. pungens* (also called Beaver Rim phlox) are rare in the state. While both are prickly members of the same family, in this case, retaining the Wyoming common names rather than changing each to "prickly phlox" avoids confusion and reinforces their taxonomic difference.

While BONAP and the PLANTS database provide common names for all species, they do not assign unique common names below the species level (variety or subspecies). So the seven varieties of *Eriogonum umbellatum* in Wyoming all have the same common name in the PLANTS database, "sulfur-flower buckwheat", including the variety that is endemic to



Above: *Phlox pungens* is called "prickly phlox" in BONAP and PLANTS database postings. However, all status reports and field guides refer to it as "Beaver Rim phlox" – the above illustration appears in the Wyoming Rare Plant Field Guide (Fertig et al. 1994). ...Plus, "prickly phlox" is the name for the *Linanthus* genus! Illustrated by Isobel Nichols.

Cont. from p. 4

Yellowstone National Park. There are 44 varieties of this species and all of the other varieties around the country that are not in Wyoming have the same species-level common name. In general, when WYNDD uses the PLANTS database common name for the type variety, then a transliteration or other helpful identifier for the variety name is used (e.g., *Eriogonum umbellatum* var. *umbellatum* is "sulfur buckwheat" and *E. u.* var. *cladophorum* is "Yellowstone sulfur buckwheat". Note: Adjectives used as part of common names that refer to flower colors are usually implicit rather than incorporating or needing the word "flower" in the common name.

At the simpler end of the spectrum, the type variety *Pyrrocoma clementis* var. *clementis* is "tranquil goldenweed" while the only variety, *P. c.* var. *villosa*, is "hairy tranquil goldenweed". Warning: common names sometimes evoke snickers among zoologists.

Group name and modifier for the species may be compound words or series of words. The Kartesz and Thieret publication (1991) propose sideboards for long strings of adjectives, adverbs and compound words in common names. At the other extreme are some monotypic genera which, by the two-part naming convention, lengthen the common name of such a species. *Shoshonea pulvinata*, widely called "shoshonea" as common name, is given the common name "Shoshone carrot" in BONAP and the PLANTS database. There is nothing carrot-like (i.e., *Daucus*-like) in the above- or belowground structure of shoshonea, so here we stick to the short-and-simple common name that has been widely used among Wyoming botanists.

In some cases, use of PLANTS database common names would mean losing pertinent cues to identify, habitat or distribution. *Carex oreocharis* is rare in Wyoming and present in the Laramie Range. It has been called "mountain-loving sedge", but its common name in the PLANTS database is "grassyslope sedge" – a name that could apply to all upland sedges in the state. We will continue to use the "mountain-loving sedge" moniker.

The transliteration of scientific names that correspond with common name means that botanists have only one attribute to remember. However, *Boechera pusilla* (literally meaning: small rockcress, the common name previously used) has "Fremont County rockcress" as its name in BONAP and in the PLANTS database. Fremont County has an endowment of different rockcress species, none of which were previously recognized by that name, so we will continue to use the "small rockcress" moniker.

A peer review of Wyoming plant species of concern list was recently completed, and the updated list will be posted next year. Changes to any part of list contents will be highlighted in bold font. You will see changes to common names. There WILL also be scientific name (Latin name) updates to reflect nomenclatural update decisions at the Rocky Mountain Herbarium. The latter is material for a future article...

References

Ackerfield, J. Flora of Colorado. 2015. Botanical Research Institute of Texas Press. Fort Worth, TX.

Dorn, R. D. 2001. Vascular Plants of Wyoming, third edition. Mountain West Publishing, Cheyenne, WY.

Kartesz, J.T. and J.W. Thieret. 1991. Common names for vascular plants: guidelines for use and application. Sida 14(3): 421-434.

Pastor, J. 2017. What should a clever moose eat? Island Press, Washington, D.C. 298 pp.

Growing Native Plants

Part 26. Short Shrubs for Flowers

By Robert Dorn

Ceanothus fendleri, Fendler Ceanothus, is a deciduous shrub to 2 feet tall and 8 feet wide with thorny stems. The leaves are somewhat small, to 1.25 inches long and 0.5 inch wide. The flowers are white, tiny, and in small clusters at the ends of branches with many clusters covering a bush. They appear from June to August. The fruit is a capsule which becomes dull red when mature. The plants occur naturally in moist to dryish open woods or open areas in the mountains and foothills. They prefer full sun to light shade and dryish, well drained soils. They are drought and alkali tolerant. They should not be given extra water to avoid root rot. They can be grown from greenwood or semiripe wood cuttings or from seed surface sown outdoors in fall. It is also in the nursery trade.

Ceanothus fendleri, Mora County, New Mexico

Holodiscus dumosus, Mountainspray, is a slow growing deciduous shrub to 4.5 (rarely 6) feet tall and wide. The leaves are somewhat small, to 1 inch long and half as wide. The flowers are tiny, white to cream, in large diffuse clusters at the branch tips and often covering the bush. They appear mostly in July and August. The plants occur naturally on rocky hills, slopes, canyons, and cliffs mostly in the foothills but extending into the plains and basins and higher in the mountains. They prefer full sun or upto a half day of shade. They are drought and alkali tolerant. They can be grown from semiripe wood cuttings or from seed that has been cold stratified for 130 days.

Holodiscus dumosus, Albany County

Philadelphus microphyllus, Desert Mock-orange, is a slow growing deciduous shrub to 4 or rarely 6 feet tall and 5 feet wide. The leaves are opposite, narrow, and to 1 inch long. The flowers are white, usually fragrant, 0.5 to 1 inch across, and 1 to 3 at the branch tips. It can bloom from May to September depending on moisture availability. The plants occur naturally on cliffs and rocky slopes in the plains and basins.

Philadelphus microphyllus, Laramie County (cultivated)

They prefer full sun and well drained soils and are drought tolerant. They will not bloom during drought and will do best with an occasional deep watering in spring. It is easily grown from seed barely covered with soil to allow some light exposure. Cold stratification for 60 days helps germination. It can also be grown from greenwood or semiripe wood cuttings. It is in the nursery trade with several cultivars.

Rosa arkansana, Custer County, South Dakota

Rosa arkansana, Prairie Rose, is a deciduous shrub with prickly stems and grows to 3 feet tall and not quite as wide. The leaves are pinnately compound with mostly 9 to 11 toothed leaflets. The flowers are pink or rose, 1 to several at the end of the main branches of the year, about 2 inches or less across, and appear from June to August. The plants occur naturally in open places of the plains and foothills in the eastern half of the state. They prefer full sun and dryish soils. They can be grown from rootstock cuttings or seed which may need 90 days cold stratification.

Tetradymia canescens, Common Horsebrush, is a bushy shrub to 2.5 feet tall and as wide. The leaves are narrow, to 1.2 inches long, and usually grayish-white from dense hairs. The flowers are yellow in small heads that are densely clustered at the ends of branches and appear from June to September. The plants occur naturally in dry open places in the plains, basins, and mountains. They prefer full sun and dry to moist well drained soil. They are drought tolerant. They can be grown from seed sown outdoors in fall. Seed is commercially available.

Tetradymia canescens, Park County, Colorado

To see the above plants in color, go to the newsletter on the Society website.

Above: *Torilis japonica* by Robert Dorn

Addition to Wyoming Flora

An introduced weed was discovered in Crook County this past summer, *Torilis japonica* (Apiaceae). It resembles *Daucus carota* (Wild Carrot, also known as Queen Anne's Lace), but differs in inflorescence characteristics. *Torilis* has linear or lance-linear, entire involucral bracts while *Daucus* has pinnately divided involucral bracts. *Torilis* also has a more bristly inflorescence. ~ Robert Dorn

Think Snow!

A new film made in the Rocky Mountains is showing across the region, after acclaim at the Banff and MountainFilm Festivals. It is called: "End of Snow," introducing the public to snowfall data through such a colorful cast of characters as Billy Barr: billy is a lover of cricket, chocolate, and Bollywood films (and spells his name with a little "b"). He is also a steward of the Rocky Mountain Biological Laboratory in Gothic, CO. Living alone in his solar-powered backcountry cabin, billy has kept a more than 40-year record of snow. His faithful observations have become one of the most detailed records of modern snowpack in the US. Through these, billy holds a key to understanding snowfall data of the region.

To learn more about the film or request a screening, contact:

Day's Edge Productions
http://www.daysedge.com/

Wyoming Native Plant Society is a non-profit organization established in 1981 to encourage the appreciation and conservation of the native plants and plant communities of Wyoming. The Society promotes education and research through its newsletter, field trips, annual student scholarship and small grants awards. Membership is open to individuals, families, or organizations. To join or renew, please return this form to:

Wyoming Native Plant Society
P.O. Box 2449
Laramie, WY 82073

Name: _____

Address: _____

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Check one: [ ] New member [ ] Renewing member

[ ] Renewing members, check here if this is an address change.

[ ] Check here if you prefer to receive the newsletter electronically

Membership

[ ] WYNPS annual membership: $10.00

[ ] WYNPS annual membership + scholarship support: $20.00 ($10.00 for membership and $10.00 for Scholarship fund)

[ ] WYNPS Lifetime membership: $300 ($150 for membership and $150 for Scholarship fund)

[ ] Sublette Chapter annual membership: $5.00

[ ] Teton Chapter annual membership: $5.00

Total enclosed: _____ THANK YOU!

Wyoming Native Plant Society
P.O. Box 2449
Laramie, WY 82073

Wyoming Native Plant Society – Renewal and Ballot

Return to: Wyoming Native Plant Society – P.O. Box 2449 – Laramie, WY 82073

2018 WYNPS RENEWAL

Name: _____

Address: _____

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Check one: [ ] New member [ ] Renewing member
[ ] Check here if this is an address change.
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Payment:
[ ] WYNPS annual membership: $10; or
[ ] WYNPS annual membership with scholarship support: $20 ($10 for membership and $10 for Scholarship fund)
[ ] WYNPS Lifetime membership: $300 ($150 for membership and $150 for Scholarship fund)

In addition to the statewide organization, we have two chapters. Membership in chapters is optional; chapter members must also be members of the statewide organization.

2018 WYNPS BALLOT – Please mail for arrival **by January 31** or email wynps@wynps.org

Please vote for one person for each Officer position, and ONE OF TWO candidates for the At-Large position:

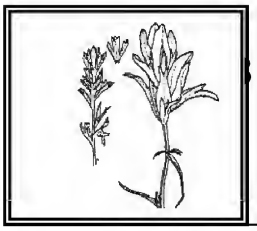
President ____ Charmaine Delmatier (Laramie/Jackson) Secretary/Treas. ____ Dorothy Tuthill (Laramie)
Vice President ____ Katy Duffy (Jackson) At-Large (2-year term) ____ Lynn Stewart (Dubois)

Write-in candidate and office: _____
[The second At-Large position is held by Brenda Schladweiler (Gillette), who will start her second year of second term.]

Thank you to candidates Charmaine Delmatier, Katy Duffy, and Dorothy Tuthill for running again! We appreciate all the time and effort.

Candidate Biographies

Lynn Stewart has a degree in Outdoor Recreation and Wildlife Biology. He is already serving on boards of the National Bighorn Sheep Center, Wyoming Wild Sheep Foundation and the Wyoming State Taxidermy Association. His keen interest in Botany was rekindled at recent WYNPS field trips and meetings, prompting him to propose that the next annual meeting be held in Dubois – a grand event he coordinated with an able team! As a board member he wants to assist and continue working with other board members to set up annual meeting and bring awareness to our wonderful Wyoming botanical resources.



Wyoming Native Plant Society

MARKOW SCHOLARSHIP/SMALL GRANT

Applications are due February 15, 2018. Awards will be made in April, 2018.

Electronic copies of this application are also posted on the WYNPS homepage at: www.wynps.org

The Wyoming Native Plant Society promotes appreciation, understanding and conservation of native plants and plant communities through its annual scholarship/small grants program. For scholarships, thesis research may address any aspect of botany including floristics, taxonomy, ecology, genetics, plant geography, range science, paleontology, pollination biology, physiology, and mycology. For small grants, projects such as botany curriculum development, public native plant gardens, and other forms of outreach will be considered. **This competition is open to all grad students who conduct research in Wyoming, residents of Wyoming or members of WYNPS.**

Proposals must pertain to native plants/vegetation of Wyoming. Preference will be given to proposals expected to generate research data or promote public understanding. Up to $1,000 may be covered for a scholarship proposal, and up to $500 for a small grant proposal. *Awards defray direct project costs, excluding labor or conferences*. Eligible expenses include:

1. Direct costs of travel, meals, and lodging for research or education projects.
2. Supply and service expenses used for the sole purpose of the project (e.g., consumable supplies such as laboratory chemicals, soil and nursery stock, and services such as phone and computer time).

The deadline for proposals is February 15. Awards will be announced in April. The proposal should be no longer than three pages and include the following:

- Name, mailing address, telephone number (land &/or cell as appropriate) and email address of the applicant.
- Name, mailing address, contact person's name & phone number for any organization that will be directly involved with the applicant when executing the proposal.
- Short abstract of the study or project (2-5 sentences).
- Description of the study or project: objectives, methods, description of final product, and short description of past similar work (if applicable). Garden proposals should include plant lists, an educational component, and explicitly address long-term maintenance plans.
- Description of how the study or project will benefit native plants or plant conservation in Wyoming.
- Overall budget showing amount requested from WYNPS ($1,000 or less), the intended purpose of the funding, and other funding sources.
- Timeline for completion of the major components of the study or project.
- Brief statement of applicant's qualifications or biography.
- Name, address, email address or phone number of two people as references.

Successful scholarship or grant recipients will be required to submit a final report (due no later than September 20, 2018) documenting the study or project accomplishments to WYNPS, written for a broad audience and suitable for publication in our *Castilleja* newsletter, along with an accounting of how the funds were used. **Please send completed applications to:** Wyoming Native Plant Society, P.O. Box 2449, Laramie, WY 82073; or wynps@wynps.org .